

CLAIMS:

1. A device for enabling a chemical formulation to be vapourized into an atmosphere comprising:
 - means for storing the chemical formulation;
 - wick means in continuous contact with the chemical formulation;
 - wick support means for supporting the wick means and having an aperture;
 - the wick means located within the wick support means;
 - means to locate the wick support means such that the aperture of the wick support means is co-located with a heater means;
 - wherein the wick means is wet by the chemical formulation and upon contact with the heater means vapourizes the chemical formulation through the aperture of the wick support means.
2. A device according to claim 1 wherein the wick support means is formed by a first portion and a second portion affixable to the first portion.
3. A device according to claim 2 wherein the wick means is located between the first portion and the second portion of the wick support means.
4. A device according to claim 3 wherein the aperture is located in the first portion of the wick support means.
5. A device according to claim 4 wherein the location means locates each of the first portion and the second portion of the wick support means such that the aperture of the first portion of the wick support means is co-located with the heater means.
6. A device according to claim 5 wherein the storage means is located on the second portion or the first portion of the wick support means.
7. A device according to claim 6 wherein the wick means is substantially elongate having a first portion in continuous contact with the chemical formulation and a second portion in contact with the heater means.

8. A device according to claim 7 wherein the heater means vapourizes the chemical formulation in the vicinity of the second portion of the wick means through the aperture of the first portion of the wick support means.
9. A device according to claim 8 wherein the second portion of the wick support means has an aperture co-located with the heater means to enable the chemical formulation to vapourize into the atmosphere through the aperture of the second portion of the wick support means.
10. A device according to claim 9 wherein the heater means has one or more pulses applied thereto in repeated fashion to provide heat in order to vapourize the chemical formulation.
11. A device according to claim 10 wherein the wick means has a resistance to flow of chemical formulation from the chemical formulation storage means sufficient to enable the second portion of the wick means to become wet after it has been dried by vapourization of the chemical formulation within a cycle of an applied pulse or pulses to the heater means.
12. A device according to claim 11 adapted to be received by portable apparatus having the heater means, the heater means being supplied with power from a portable power supply.
13. A device according to claim 11 adapted to be received by apparatus having the heater means, the heater means being supplied with power from a mains power supply.
14. A device according to claim 12 or claim 13 wherein the location means is a pair of indentations, one on each side of the wick support means, that act in an interference fit with corresponding projections on the apparatus, which when engaged provide an indication to a user that the device is correctly located with respect to the apparatus.
15. A device according to claim 12 or claim 13 wherein the location means is a pair of projections, one on each side of the wick support means, that act in an interference fit with corresponding indentations on the apparatus, which when engaged provide an indication to a user that the device is correctly located with respect to the apparatus.

16. A device for enabling a chemical formulation to be vapourized into an atmosphere comprising:

means for storing the chemical formulation;

wick means in continuous contact with the chemical formulation;

wick support means for supporting the wick means and in contact with the wick means, the wick support means having an aperture;

wherein the wick means is wet by the chemical formulation and, upon application of heat from a heater means to the wick support means indirectly heats the wet wick means and thereby vapourizes the chemical formulation into the atmosphere through an exposed portion of the wick means and the aperture of the wick support means;

wherein further the device is releasably insertable into a heater unit having the heater means.

17. A device according to claim 16 wherein the exposed portion of the wick means is one end or one edge of the wick means.

18. A device according to claim 16 or claim 17 wherein the whole device has heat applied thereto in order to vapourize the chemical formulation.

19. A device according to claim 16 or claim 17 wherein the exposed portion of the wick means has heat applied thereto in order to vapourize the chemical formulation.

20. A device according to any one of claims 16 to 19 wherein the wick support means is formed by a first portion and a second portion affixable to the first portion.

21. A device according to claim 20 wherein the wick means is located between the first portion and the second portion of the wick support means.

22. A device according to claim 21 wherein the storage means is located on the second portion of the wick support means.

23. A device according to claim 22 wherein the wick means is substantially elongate having a first portion in continuous contact with the chemical formulation and a second portion in communication with the aperture, the aperture located in either the first portion or second portion of the wick support means.

24. A device according to claim 22 wherein the wick means is located substantially transverse to the wick support means and storage means.
25. A device according to claim 24 wherein the wick means is substantially planar and has a first edge mounted flush with a corresponding first edge of each of the first portion and second portion of the wick support means.
26. A device according to claim 25 wherein the first edge of the wick means is exposed to the atmosphere.
27. A device according to claim 25 or claim 26 wherein the wick means has a second edge mounted flush with a corresponding second edge of each of the first portion and second portion of the wick support means.
28. A device according to claim 27 wherein the second edge of the wick means is exposed to the atmosphere.
29. A device according to any one of claims 16 to 18 wherein the wicks means is located in and separated by a partition from the chemical formulation storage means.
30. A device according to claim 29 wherein one or more portions of the wick means is in contact with the chemical formulation storage means across the partition in order to allow the wick means to be wet by the chemical formulation.
31. A device for enabling a chemical formulation to be vapourized into the atmosphere and releasably insertable into a heating unit, the device comprising:
 - means for storing the chemical formulation;
 - wick means for contacting the chemical formulation;
 - a housing enclosing a portion of the wick means adapted to engage and retain the device in the heater unit, the heater unit having a heater means; and
 - wick support means in contact with the wick means and proximal to the heater means when the device is inserted into the heater unit;
 - wherein the wick means is wet by the chemical formulation and is heated indirectly by the wick support means to vapourize the chemical formulation through an aperture of the housing into the atmosphere.

32. A device according to claim 31 wherein the wick support means comprises a first layer made from a first material and a second layer made from a second material, the second layer bonded to the first layer.

33. A device according to claim 32 wherein the housing and storage means are made from the second material and are bonded to the second layer of the wick support means.

34. A device according to claim 33 wherein the wick means is placed on the second layer of the wick support means and the storage means is filled with the chemical formulation prior to bonding or sealing the storage means and the housing to the second layer of the wick support means.

35. A device according to claim 34 wherein the first material is crystalline PET.

36. A device according to claim 34 or claim 35 wherein the second material is amorphous PET.

37. A device according to claim 34 further comprising an additional layer made from the second material covering any part of the wick means not covered by the housing or the storage means, the additional layer being bonded to the second layer.

38. A device according to claim 37 wherein the housing has one or more depressions to keep the wick means in contact with the wick support means.

39. A device according to claim 38 wherein the first layer is heated by the heater means and subsequently the second layer and wet wick means are heated when the device is inserted into the heater unit.

40. A device according to claim 39 wherein the first layer is heated by convection wherein an air gap is defined between the first layer of the wick support means and the heater means when the device is inserted into the heater unit.

41. A device according to claim 39 wherein the first layer directly contacts the heater means and is heated when the device is inserted into the heater unit.

42. A device according to claim 39 further comprising a step located between the storage means and the housing to provide an alternative engagement of the device with the heater unit.

43. A device according to claim 31 such that when the chemical formulation is not in direct contact with the wick means, due to the orientation of the heater unit or the device, the chemical formulation moves along a side of the storage means by capillary action until it reaches the wick means in contact with the storage means, thereby wetting the wick means.

44. A device according to claim 43 wherein the capillary action occurs due to the geometry of a join between the storage means and the wick support means.

45. A device for enabling a chemical formulation to be vapourized into the atmosphere comprising:

a substrate;

means for storing the chemical formulation;

wick means for contacting the chemical formulation;

a housing enclosing a portion of the wick means;

the wick means, housing and storage means in contact with the substrate and the wick means extending between the housing and the storage means;

wherein the device is releasably insertable into a heater unit having a heater means whereby the substrate is heated by the heater means and thereafter the wick means, wet by the chemical formulation, is heated to vapourize the chemical formulation through an aperture in the housing into the atmosphere.

46. A device according to claim 45 wherein the housing is adapted to engage and retain the device in the heater unit.

47. A device according to claim 46 wherein the substrate comprises a first layer made from a first material and a second layer made from a second material, the second layer bonded to the first layer.

48. A device according to claim 47 wherein the housing and the storage means are made from the second material and are bonded to the second layer.

49. A device according to claim 48 wherein the wick means is placed on the second layer and the storage means is filled with the chemical formulation prior to the bonding of the storage means and the housing to the second layer of the substrate.
50. A device according to claim 49 wherein the first material is crystalline PET.
51. A device according to claim 49 or claim 50 wherein the second material is amorphous PET.
52. A device according to claim 49 further comprising an additional layer made from the second material which covers any part of the wick means not covered by the housing or the storage means, the additional layer being bonded to the second layer.
53. A device according to claim 52 wherein the housing has one or more depressions to keep the wick means in contact with the substrate.
54. A device according to claim 53 wherein the first layer is heated by the heater means, and subsequently the second layer and wet wick means is heated, when the device is inserted into the heater unit.
55. A device according to claim 54 wherein the first layer is heated by convection such that an air gap is defined between the first layer and the heater means when the device is inserted into the heater unit.
56. A device according to claim 54 wherein the first layer is in direct contact with the heater means and thereby heated when the device is inserted into the heater unit.
57. A device according to claim 55 or claim 56 further comprising a step located between the storage means and the housing to provide an alternative engagement of the device with the heater unit.
58. A device according to claim 45 such that when the chemical formulation is not in direct contact with the wick means, due to the orientation of the heater unit or the device, the chemical formulation moves along a side of the storage means by capillary

action until it reaches the wick in contact with the storage means, thereby wetting the wick means.

59. A device according to claim 58 wherein the capillary action occurs due to the geometry of a join between the storage means and the substrate.

60. A method of constructing a device for enabling a chemical formulation to be vapourized into the atmosphere, the method comprising the steps of:

forming a substrate comprising a first layer made of a first material;

forming a storage means for the chemical formulation and made from a second material;

forming a housing made from the second material;

placing a wick means on the substrate; and

bonding the storage means and the housing to the substrate such that the wick means is partially enclosed by the housing and extends into the storage means to enable contact with the chemical formulation.

61. A method according to claim 60 further comprising the steps of:

forming a second layer in the substrate made from the second material; and
bonding the second layer to the first layer.

62. A method according to claim 61 wherein the step of placing comprises placing the wick means on the second layer of the substrate.

63. A method according to claim 62 wherein the step of bonding includes bonding of the storage means and the housing to the second layer.

64. A method according to claim 63 wherein the first material is crystalline PET.

65. A method according to claim 63 or claim 64 wherein the second material is amorphous PET.

66. A method according to claim 63 further comprising a step of forming one or more depressions in the housing to keep the wick means in contact with the substrate.

67. A device for enabling a chemical formulation to be vapourized into the atmosphere formed by any one of the method steps in claims 60 to 66.

68. A device for enabling a chemical formulation to be vapourized into the atmosphere comprising:

means for storing the chemical formulation;

wick means for contacting the chemical formulation;

wick support means in contact with the wick means and proximal to a heater means;

such that when the chemical formulation is not in direct contact with the wick means, due to the orientation of the heater means, the chemical formulation moves along a side of the storage means by capillary action until the chemical formulation reaches the wick means in contact with the storage means, thereby wetting the wick means;

whereupon the wick means is heated indirectly by the wick support means to vapourize the chemical formulation into the atmosphere.

69. A device according to claim 68 wherein the capillary action occurs due to the geometry of a join between the storage means and the wick support means.

70. A device for enabling a chemical formulation to be vapourized into the atmosphere comprising:

means for storing the chemical formulation;

wick means for contacting the chemical formulation;

wick support means in contact with the wick means and proximal to a heater means;

such that the wick means extends along an edge joining the storage means and the wick support means whereby the chemical formulation moves along the wick means by capillary action until the chemical formulation reaches an area of the wick means that is heated indirectly by the wick support means to vapourize the chemical formulation into the atmosphere regardless of the orientation of the device.